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ANACONDA Copper Company
New Mexico Operations
P.O. Box 638
Grants, New Mexico 87020
505/876-2211

Laguna #8

August 14, 1980

9393192

Mr. Edward T. Sandell, Jr.
Acting Deputy Conservation
Manager - Mining
Conservation Division
U. S. Geological Survey
P. O. Box 26124
Albuquerque, New Mexico 87125

Dear Mr. Sandell:

Anaconda Copper Company hereby submits for your approval the mining and reclamation plans for the P-13 underground mining project on the Laguna Reservation. P-13 is an extension of the P-10 Mine and is submitted as a supplement to the approved mining and reclamation plans for P-10.

This submittal is made in accordance with applicable federal codes, rules, and regulations, and was prepared by reference to Requirements for Exploration, Mining and Reclamation Plans, Exhibit 4, 623.5.3B.

This project was originally planned to be an open pit development, but increasing operating costs and reduced uranium prices have made open pit mining in this area uneconomic, and the ore is now planned to be mined by conventional underground methods.

Development work for the P-13 extension will begin from the present P-10 Mine workings upon approval of the project. This will be necessary to maintain the supply of ore previously expected from open pit operations, and to compensate for declining production from the PW-2/3 and P-10 Mines. The PW-2/3 Mine may cease operations in September, 1980. Production from the P-10 Mine is likely to be reduced by about half by January, 1981, and to subsequently decline to exhaustion at about the end of 1981 or possibly into 1982. This assumes that there will be no new mineral discovery in these mines or that any other unforeseen event will occur affecting longevity.

Submission of the P-13 extension as a supplement to the P-10 Mine plan has precedence in supplements previously approved by your office: the P-7 and P-15/17 extensions to P-10, and the P-9-3 and P-11 extensions to P-9-2. P-13 will, like other extensions, be dependent upon P-10 for underground access to men, air, water, ventilation, and operating supplies, and will utilize P-10's surface and underground facilities for offices, dry room, and maintenance and repair shops.

Accompanying this submittal is a map "Proposed P-13 Mine Plan" dated July 7, 1980, showing major surface features, the interconnection to P-10, the portals in the open pit, track haulage drifts, raises and vent holes, proposed stopes, and proposed surface subsidence monitoring survey points. Lenses of non-economic mineralization that are not scheduled for mining but which will be targets for underground examination are also shown.

The P-13 mining will be contained within Anaconda's Number Four Mining Lease on the Laguna Reservation, in Sections 4 and 9, Township 10 North, Range 5 West, New Mexico Prime Meridian, Valencia County, New Mexico. The lessee is represented by R. D. Lynn, General Manager, New Mexico Operations, Anaconda Copper Company, Box 638, Grants, New Mexico, telephone (505)876-2211. The lessor is the Pueblo of Laguna, P. O. Box 194, Laguna, New Mexico, 87026, telephone (505)552-5651.

Anaconda Copper Company will comply with all applicable federal and state laws and regulations governing the P-13 mining operations conducted on the Lease Four of the Laguna Indian Reservation.

Anaconda requests that the confidentiality of proprietary status be granted to those parts of this document which are marked by stamp: "Anaconda Confidential."

Description of Existing Area

The P-13 extension to the P-10 Mine will develop and mine uranium ores adjacent to the east side of the P-10 Mine workings. Commercial mineralization occurs as random, irregular, lens-shaped concentrations of uranium minerals that are roughly conformable to bedding structures in the host Jackpile sandstone of Jurassic age.

The Jackpile sandstone is overlain by the Dakota and Mancos formations of Cretaceous age, which have been eroded to mesa topography typical of the San Juan Basin. The P-13 workings will be at an average depth of 270 feet from the surface, ranging from 230 to 370 feet.

Surface water in the vicinity of the P-13 workings consists of transient seasonal runoff resulting from precipitation on Black Mesa. Ground water is contained principally in the Jackpile sandstone, which serves as a source of potable water supply for the P-10 well, from which 7,947,300 gallons of water were pumped in 1979 for human consumption and industrial use. The P-10 Mine workings in the Jackpile sandstone were drained of 54,521,450 gallons of water in 1979. These well and mine waters are monitored for mineral and radiological constituents.

The additional surface facilities that are planned to be added to the P-10 Mine complex in order to mine the P-13 area consists of three drilled vent holes. These vents will be located on ground surfaces that are already impacted by mining or development drilling activities. None of these facilities will cause the destruction of known archaeological sites as determined by comprehensive archaeological surveys conducted for and approved in the mining and reclamation plans for the P-15/17 Mine. Access to the vents will be by the present system of roads.

Proposed Mining Activity

The P-13 extension to the P-10 Mine contains an ore reserve that is estimated from surface drilling to weigh 221,200 tons. The first ore production is planned for three months after the start of development, and the total production life is planned to be 38 months at an average rate of production of 70 thousand tons of ore per year. These data are estimates, and the actual results of production over the life of the project may vary due to future unforeseen operating and economic conditions.

The P-13 ore will be mined by conventional underground methods. Development work will require about 9,800 feet of haulage drift consisting of adits, declines, crosscuts, turnouts, and return track. About 900 feet of manway and ore pass raises will be driven from the haulage level to access the ore stopes. Development work during the life of the project is expected to produce 73,800 tons of waste.

A decline will be driven easterly down grade from the present P-10 decline for a distance of about 1,250 feet to an elevation below the ore stopes that will be mined in P-13. During this time, and after mining operations have been completed in the open pit, an adit will be collared in the open pit and driven south up grade to intercept the bottom of the decline. The adit will be advanced south during the course of mining to allow the progressive development of mining stopes. The adit will be used for the discharge of ore and waste rock, for ventilation, and as a safety exit.

A second adit will also be collared in the open pit and interconnected to the first adit for the development and production of ores left in the open pit walls.

All development and production work in the P-13 project will be done by conventional methods, utilizing the same types of equipment used and proven to be successful in the P-10 Mine. Rock breakage for excavation will be done by conventional drill and blast methods.

Trackless haulage equipment (2-yard loaders) will be used for the mining of the ore left adjacent to the open pit walls. Rail Mechanized equipment (8-ton diesel locomotives and 5-ton Telluride cars) will be used in the remainder of the project. Stope mining will be done by the room-and-pillar method, using 3-drum 30-horsepower slushers. Ground support will be maintained by conventional rock bolts (split sets), wire netting, steel and/or timber sets and stulls, cribbing, and pillars left in place at selected locations. Ventilation of the mine will be supplemented by the installation of three vent holes.

The P-13 extension will be dependent upon support from the present P-10 facilities through the interconnecting decline. The decline will provide the major supply route for the passage of workmen, supplies and material, and will contain transmission lines for compressed air, water, electrical power, and telephone service. The decline will provide access to the surface facilities of P-10 for parking, management and engineering offices and sanitary facilities, and to the surface and underground shops for the maintenance and repair of equipment.

The decline will be used for the discharge of ore and waste to the surface through the P-10 portal during the development phase of P-13, and thereafter as needed when the adit haulage facilities are down for repairs or maintenance.

Surface facilities will be provided at the portal of Adit No. 1 in the open pit for the dumping and segregation of ore and waste rock, for the repair of rail and trackless equipment that cannot be transported up the decline to the P-10 shops, and a sump for the collection of mine drainage water.

Upon completion of the P-13 project, abandonment methods will be governed by the applicable existing laws and regulations in effect at that time. It is expected that the facilities in the open pit will be dismantled and removed to permit backfilling of the open pit and the adit portals sealed and covered with open pit backfill material. Vent holes will be plugged and the surface reclaimed.

Measures for Preventing Pollution

The surface water nearest to the P-13 operation is Paguate Creek, located about three-fourths of a mile northeast of the portal of Adit No. 1. Mine drainage water from P-13 will be impounded in a sump in the bottom of the mined-out open pit workings, and will be used for dust suppression on the P-10 and P-13 access roads and the excess will be allowed to evaporate. Waste rock from P-13 will be disposed of in the open pit as backfill or placed in open pit waste dumps for future reclamation.

Drainage from the P-13 underground workings in the Jackpile sandstone is expected to be at a discharge rate less than the present rate of 100 gallons per minute that is being pumped from the P-10 Mine, because the workings will be less extensive. The naturally low transmissibility of the Jackpile formation will inhibit significant areal depletion of the aquifer over the short life of the project. It is expected that the aquifer will be naturally restored to equilibrium after the adits are plugged for abandonment, and that the underground mining excavations will not prove to be detrimental to the aquifer.

The air that will be discharged from the vent holes will not be detrimental to the environment. All working places from which discharge air is collected will be controlled in such manner that deleterious particulate and gaseous concentrations are kept within the limits of health and safety standards.

Subsidence of the ground surface overlying the underground workings is not expected to occur. A subsidence monitoring system consisting of fixed survey points will be installed where State Road 279 crosses the planned mine excavations. These points will be surveyed for baseline data prior to beginning the P-13 project and will be surveyed periodically thereafter during operations.

Proposed Reclamation Activity

Reclamation of P-13 will be incorporated in the P-10 reclamation activities, and will consist of plugging the adit entrances, filling the vent holes, and reclaiming the site surface, and such other measures as the existing laws and regulations will dictate at the time of abandonment. These measures as they apply to P-10 will be addressed as part of the open pit reclamation operations for which a comprehensive plan is now being formulated by Anaconda in cooperation with the U. S. Geological Survey, the Pueblo of Laguna, and other interested parties.

Ancillary Information

The P-13 project will receive all supporting services from the existing P-10 infrastructure. The amount of potable water that will be used in P-13 is expected to be significantly less than the present rate of consumption of water in P-10 of about 30,000 gallons of water per average working day. Access to the adit portals in the open pit will be over existing mine roads through areas already disturbed by mining activities.

Estimates of the average annual personnel requirements for operation of the P-13 extension of the P-10 Mine are presented in the table

below. Support personnel that are shared with P-10 and other mines are prorated.

		1980*	1981	1982	1983
Hourly:	Skilled	9	18	26	53
	Unskilled	2	3	5	5
Salary:	Supervision	2	4	6	10
	Technical	4	8	12	20
		17	33	49	88

*Partial year of operation, pending approval.

If further information is needed to process these submittals, please permit our immediate response by telephoning me or Earl Arlin at (505) 876-2211.

Sincerely,

M. A. Stirland, Manager
Environment, Health & Safety

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Enclosure (1)